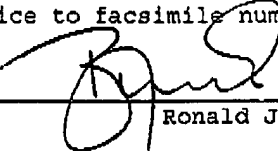


OCT 19 2009

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE HONORABLE BOARD OF PATENT APPEALS AND INTERFERENCES

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Ronald J. Kubovcik

REPLY BRIEF

Ex parte Atsushi FUKUI et al.

NEGATIVE ELECTRODE FOR LITHIUM SECONDARY CELL
AND LITHIUM SECONDARY CELL

Serial Number: 10/519,073
Filed: December 23, 2004
Appeal No. : (Not yet assigned)
Group Art Unit: 1795
Examiner: Cynthia K. Lee
Dkt. No. MAM-056

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Date: October 19, 2009

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OCT 19 2009

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE HONORABLE BOARD OF PATENT APPEALS AND INTERFERENCES

Appl. No. : 10/519,073 Confirmation No. 7337
Applicant : Atsushi FUKUI et al.
Filed : December 23, 2004
TC/A.U. : 1795
Examiner : Cynthia K. Lee
Dkt. No. : MAM-056
Cust. No. : 20374

REPLY BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

October 19, 2009

Sir:

This Reply Brief responds to the Examiner's Answer dated August 19, 2009, in the appeal to the Board of Patent Appeals and Interferences in the patent application identified above. In particular, this Reply Brief responds to the points of argument of the Examiner in the Examiner's Answer explained below.

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(1) In the Reply Brief filed December 29, 2008, appellants argued that the data in the application show that the properties of the current collector depend on the conditions of heat treatment and that treatment at a temperature that is above the glass transition temperature but below the decomposition temperature of the binder will not necessarily result in a current collector that meets the limitations of the claims.

More particularly, appellants argued that current collectors a7 and b2 identified in Tables 12 and 13 of the application are both an electrolytic copper foil having the same thickness and the same surface roughness. Current collector b2 is heat treated at a temperature that is above the glass transition temperature of the binder used in Experiment 8 (148 °C) but below the decomposition temperature. Current collector b2 has an elongation of break that falls outside the scope of the present invention. On the other hand, current collector a7, which was heat treated under the same conditions as current collector b2 and was additionally heat treated at 400 °C for 10 hours, had properties falling within the scope of the present invention.

In the current Examiner's Answer the Examiner states that this argument is flawed because current collector b2 is heated above the glass transition temperature [of the binder] whereas she had noted

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in the rejection that the current collector needs to be heated above the melting temperature.

The Examiner's position regarding heating above the melting temperature is inconsistent with the 35 U.S.C. § 103(a) rejection. The 35 U.S.C. § 103(a) rejection is based on a position that it would have been obvious to sinter the negative electrode of Nobufumi as modified by Fujimoto above the glass transition temperature but below the decomposition temperature of the binder. (See the Answer, page 10, lines 2-6). There is no basis in the prior art to limit the proposed modification to heat treatment at a temperature above the melting temperature.

(2) The second argument made by the Examiner is that the mechanical properties [defined in the claims on appeal] exist in the combination of references because it is an inherent property.

The Examiner is confusing anticipation, i.e., inherency, under 35 U.S.C. § 102 with obviousness under 35 U.S.C. § 103(a). Even if it is assumed that the mechanical properties of the current collector of a negative electrode resulting from the modification of the negative electrode of Nobufumi as proposed by the Examiner are somehow inherently within the scope of the mechanical properties of the current collector recited in the claims on appeal, such "inherency" will not support obviousness of the claims

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under 35 U.S.C. § 103(a). The negative electrode allegedly suggested by the combination of references relied upon in the 35 U.S.C. § 103(a) rejection does not exist in the prior art and, thus, possible inherency of properties is irrelevant.

Therefore, the data in the examples of the present application which show criticalness of the mechanical properties of the current collector and of the mechanical properties of the binder of the active material layer of the negative electrode of the present invention in obtaining unexpected superior charge-discharge cycle characteristics are entitled to full weight. These data demonstrate the non-obviousness of the negative electrode of the present invention and rebut any prima facie obviousness alleged to be supported by the cited prior art. (Compare, for example, the data in Table 5 of appellants' specification for the properties of batteries A1-A2 of the invention using a current collector which has the mechanical properties recited in claim 2 with battery B1 in which properties of the current collector are not within the scope of claim 2; the data in Table 7 for batteries A1, A9 and A10 of the invention in which the binder is within the scope of claim 2 with battery B2 in which properties of the binder are outside of the scope of claim 2; and the data in Table 15 for the properties of batteries A15 and A16 of the invention using a current collector

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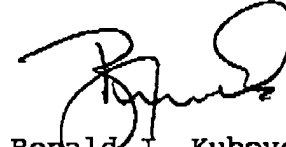
which has the mechanical properties recited in claim 2 with battery B5 in which properties of the current collector are not within the scope of claim 2).

Reversal of the 35 U.S.C. §103 ground of rejection made by the Examiner in the Final Action is in order and is respectfully solicited.

In the event that any fees are required in connection with this paper the Commissioner is authorized to charge Deposit Account No 111833.

Respectfully submitted,

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